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IDENTIFIERS Vocational Education Curriculum Specialists

ABSTRACT

Part of an eight-module, graduate level, competency-based curriculum to prepare specialists in vocational education curriculum, this module provides information, activities, and experiences to assist in planning and implementing an assessment of curriculum development needs as the initial step in vocational program planning. Pretest, posttest, and a glossary of terms precede the instructional objectives and learning activities which are organized according to nine major performance objectives. The first three objectives are concerned with definitions and rationale for the needs assessment process, vocational education needs assessment, and various scope and models of needs assessment. Objectives four and five introduce sources of manpower data and ways of using manpower information in curricular decisions. Objective six deals with the special needs of the disadvantaged and handicapped, while the following objective requires learners to develop a data collection plan. In performance objective eight, learners develop a plan for collecting local needs assessment data. The final objective requires learners to analyze and interpret needs assessment information in making recommendations for curriculum change. These major objectives are subdivided into several instructional objectives which are accompanied by related learning activities. The learning activities include fact sheets, worksheets, activity sheets, and keys. (Author/NJ)

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for

GRADUATE PROGRAM

to Prepare

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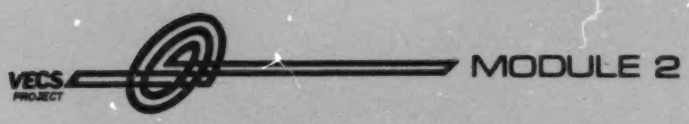

Evaluating & Using Needs Assessment & Manpower Information

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The content of this module was used as a part of a graduate course in Vocational Technical Education at Washington State University. The effectiveness of the curriculum material was evaluated on the basis of:

1. Performance data from pre and post tests and other evaluative techniques used in the course.
2. Use of a Curriculum Evaluation Questionnaire which was developed, administered and summarized by the third party evaluator, Northwest Regional Education Laboratory. This questionnaire provided a faculty and student rating of: individualization of the curriculum, choice of learning settings and quality of curriculum.

Revisions in final drafts utilized these evaluations.

COMPETENCY

THE VOCATIONAL EDUCATION CURRICULUM SPECIALIST WILL DEMONSTRATE THE ABILITY TO IDENTIFY, EVALUATE AND USE NEEDS ASSESSMENT AND MANPOWER INFORMATION AND TO ASSIST THE CURRICULUM TEAM IN THIS PROCESS.

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INTRODUCTION

The needs assessment process is one of the first and most crucial steps in planning vocational programs. This initial step is also a challenging one because the entire focus of vocational programs, including facilities and staff, is based chiefly on the assessment of needs. As a basis for curriculum development, two major components of vocational needs assessment can be identified: student needs and occupational needs.

Student Needs. One process of student needs assessment can be informally described as determining the difference between "where we are" and "where we want to be." Roger A. Kaufman[1] refers to this as discrepancy analysis. This analysis, or assessment, is an essential part of any curriculum development process. In establishing vocational programs, a second student-related need that must be considered is the interest of students in the program. A successful program starts with enrollees who are knowledgable about the requirements of the program and about their own abilities. With this knowledge they are able to make informed decisions about their interest in possible careers.

Occupational Needs. An analysis of occupational needs has traditionally been the basis for developing vocational curriculum. The Smith-Hughes Act, enacted in 1917, emphasized the vocational training of workers to fit the occupational needs of industry and agriculture, and as vocational education has grown and expanded this tradition has continued.

At the local level, surveys and advisory committee recommendations can be used to determine occupational needs. At the state, regional and national level, the Department of Labor (DOL), for several years, has prepared statistics which provide an assessment of occupational needs. For example, in 1972, the DOL

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[1] Roger A. Kaufman, Educational System Planning, (Englewood Cliffs, NJ: Prentice Hall, Inc., 1972), Chapters 1 and 2.

published and distributed a slide tape presentation entitled, "Looking Ahead to a Career 1972-1985." This presentation projects manpower needs on a national level.

The importance of the needs assessment step is reflected in its use as the basis for establishing new vocational programs. A vocational program with the newest facility and the latest equipment is of little use if there are no jobs for graduates or no student interest in the program. An assessment which includes both occupational and student needs is essential for sound vocational planning.

Purpose

This module provides information, activities and experiences which will assist the vocational education curriculum specialist in planning and implementing an assessment of curriculum development needs.

This needs assessment process is the initial step in initiating, modifying and/or terminating various components of the total vocational education delivery system. Data for this process are frequently available in various forms from different public and private agencies. Additional information may have to be collected by the curriculum development team. The activities in this module require the learner to locate and analyze existing information and to plan for the collection of additional data.

Rationale

Accurate identification of educational needs is a recognized prerequisite for sound curriculum planning and development. In some cases it is a requirement. A local district must develop one- and five-year plans which describe present and future needs, and submit a plan for fulfilling those needs. Assessment of human, material and occupational needs provide research data needed for the

identification of vocational program goals, development of curricular procedures, implementation of program innovations, and evaluation of program outcomes. The curriculum specialist must be able to identify and analyze appropriate data from various sources for use in curriculum planning.

Assumptions

The module, Evaluating and Using Needs Assessment and Manpower Information, is based on the following assumptions:

1. Needs assessment is a continuous process that is carried out before, during and after the development of vocational education curricula;
2. There is no one best system for conducting needs assessment;
3. There is considerable needs assessment data gathered by local, state and national agencies and these are readily available;
4. Successful needs assessment surveys require representative participation of all groups affected by the proposed curricular changes;
5. The conduction of local needs assessment surveys is primarily an administrative responsibility, but the Vocational Education Curriculum Specialist requires sufficient background to assess those needs identified from continuous evaluation of the curriculum;
6. The assessment of needs for vocational education programs must focus both on present needs and projected needs; and
7. Systematic collection or utilization of existing data for needs assessment is not merely a mechanical activity, but a humanistic function requiring sensitivity, insight and patience on the part of the Vocational Education Curriculum Specialist.

Overview of Module

In this module, the learner begins with definitions and rationale for the

needs assessment process, and differentiates the process for vocational education from general needs assessment. Subsequently, objectives explain where needs assessment can fit into the process of curriculum development, and describe the various scopes and models of needs assessment.

With PERFORMANCE OBJECTIVE 4, the learner is introduced to sources of manpower data. The next objective involves using the manpower information in making curricular decisions.

PERFORMANCE OBJECTIVE 6 deals with the special needs of the disadvantaged and handicapped, while the following objective requires learners to develop a data collection plan for the needs and interests of all students.

In PERFORMANCE OBJECTIVE 8, learners will develop a plan for collecting local needs assessment data. The module's final objective requires learners to analyze and interpret needs assessment information in making recommendations for curriculum change.

Module Prerequisites

Learners who use this module should have had at least three years of teaching experience and should have completed the Prerequisite Module in this Vocational Education Curriculum Project series.

Suggestions for Module Use

In comparing the objectives of the Evaluating and Using Needs Assessment and Manpower Information module with those of Preparing for Curriculum Change, and Developing Curriculum: Goals, Objectives and Instructional Plans, it can be noted that the objectives and competencies of the three are not entirely discrete. In reality, the curriculum process cannot be divided into neat, precise steps and a certain amount of overlap is inevitable.

The instructor who guides students through this module should first study the objectives of the modules on Curriculum Change, and Developing Curriculum. The appropriateness of the various needs assessment activities then can be evaluated against the background of the students.

PRETEST

1. General education needs assessment : vocational education needs assessment as
   a. student needs : societal needs
   b. student and societal needs : student and occupational needs
   c. student curriculum needs : manpower requirements and opportunities
   d. students in general education and precollege curricula : students in vocational classes and future vocational students
   e. student needs : student needs, community needs, and parental opinions

2. The best definition of educational needs assessment is:

   a. a systematic method of solving problems related to students and society.
   b. a way of determining what students, parents, and school officials want from the educational institution.
   c. a process of defining a school district's educational philosophy through cooperation of the community and the school.
   d. a method of determining the difference between current educational outcomes and desired outcomes.
   e. a process designed to measure the degree to which an educational program has been implemented.

3. Prior to developing objectives, Tyler would have us look at:

   a. existing programs.
   b. student needs.
   c. contemporary life.
   d. both b and c.
   e. a, b, and c.

4. As part of the curriculum development process, needs assessment is performed:

   a. as a basis for formulating objectives.
   b. following a definition of educational goals.
   c. as a means to define district educational goals.
   d. a, b, and c are correct.
   e. only a and b are correct.

5. All of the following are identified as models which can be used for conducting educational needs assessment EXCEPT:

   a. the Delphi Model.
   b. the Classic Model.
   c. the Inductive Model.
   d. the Deductive Model.

6. Choose the following statement about models for conducting needs assessment that is NOT TRUE.
Models for needs assessment:

   a. are designed to produce information that compares the current condition to the desired condition.
   b. should involve representatives from all groups affected by the educational programs.
   c. are generally adaptable to vocational needs assessment.
   d. begin with the same information and have the same number of steps.

7. Probably the best source of information about employment trends at the national level is:

   a. The Dictionary of Occupational Titles, Vol. I.
   b. The Dictionary of Occupational Titles, Vol. II.
   c. Encyclopedia of Occupational Trends.
   d. The Occupational Outlook Handbook.
   e. The National Occupational Forecast Guidebook, Vol. 1-5.

8. Local employment security offices and labor unions are the best places to acquire all of the following EXCEPT:

   a. job descriptions.
   b. manpower information.
   c. demographic data.
   d. business locations.
   e. student vocational interest data.

9. The Occupational Outlook Handbook provides the following information EXCEPT:

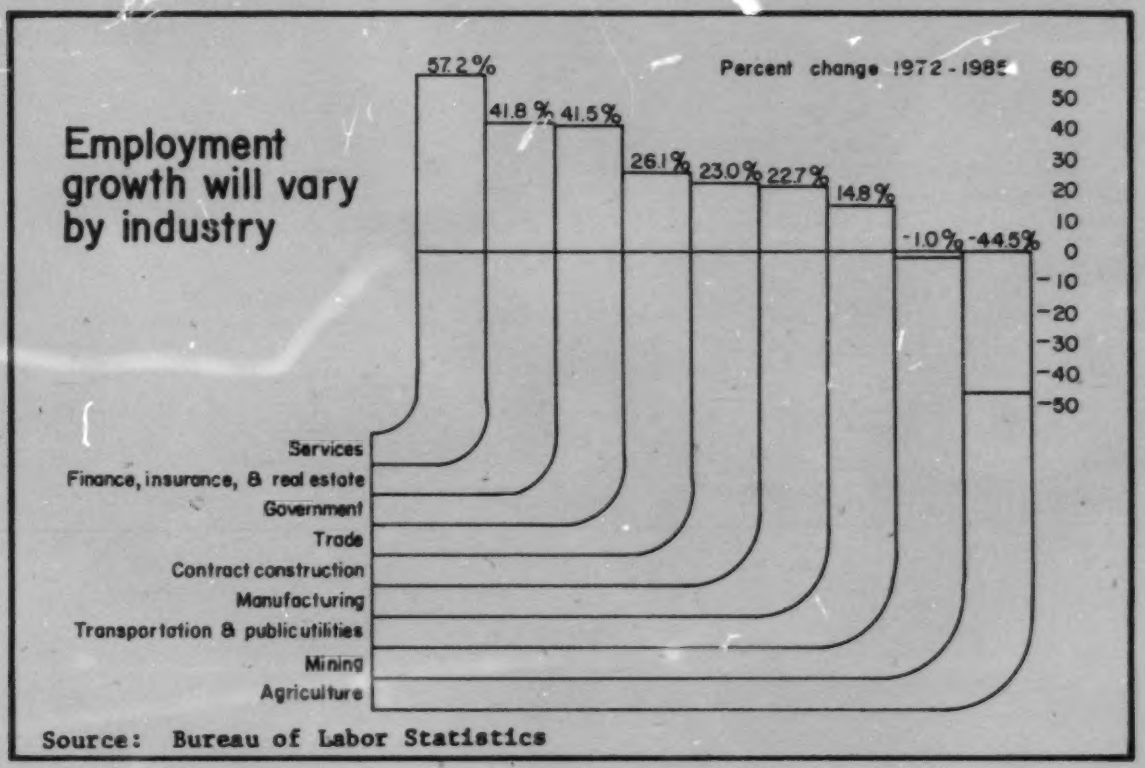
   a. nature of work.
   b. geographic locations.
   c. training and other qualifications.
   d. employment outlook.
   e. earnings and working conditions.

10. Manpower forecasting can be accomplished by various means, including trend extrapolation or econometric techniques. Which of the following statements about forecasting techniques is true?

   a. Trend extrapolation can be described as a naive model because it is a simple extension of a linear trend .
   b. Trend extrapolation involves the analyses of input-output tables and construction of a section-by-occupation matrix.
   c. Econometric techniques assume that what will happen in the future is a linear extension of what has occurred in the past.
   d. An area skills survey is a good example of an econometric technique for manpower forecasting.
   e. Trend extrapolation and econometric techniques use the same data and generate the same results.

A CHANGING EMPLOYMENT PICTURE:

1972-85



11. From the information on the graph above, which employment areas have the greatest amount of change?

1. services
2. finance, insurance, and real estate
3. mining
4. agriculture

a. 1,3
b. 2,4
c. 1,2
d. 1,4
e. 2,3

12. Which of the following characteristics would not describe the culturally disadvantaged?

    1. exhibit different behavior patterns
    2. exhibit different aspirations
    3. are forced to live below poverty level
    4. generally highly mobile

    a. 1
    b. 1, 2
    c. 3, 4
    d. 2, 4
    e. 3

13. Which of the following characteristics are (is) common in identifying the handicapped student?

    1. visually impaired
    2. hearing impaired
    3. crippled and health impaired
    4. emotionally disturbed and socially maladjusted

    a. 1, 2
    b. 3
    c. 4
    d. 1
    e. 1, 2, 3, and 4

14. As a vocational teacher what kinds of information are appropriate to collect in order to determine the needs and interests of students?

    1. physical needs
    2. social needs
    3. educational needs
    4. emotional needs

    a. 1, 2, and 3 only
    b. 2, 3, and 4 only
    c. 3 only
    d. 2 and 3 only
    e. 1, 2, 3, and 4

15. Which of the following is the least valid use of information about student needs and interest?

    a. developing curriculum
    b. designing facilities
    c. planning for instruction
    d. adapting programs to individuals
    e. evaluating entry-level competencies

16. Planning a vocational needs assessment survey involves all the following EXCEPT:

a. describing the model to be used.
b. identifying the persons to be involved.
c. defining the scope of the study.
d. identifying or designing the instruments for gathering data.
e. analyzing and categorizing the data.

17. Needs assessment for total program planning should involve which of the following categories of people?

a. advisory committees
b. state personnel
c. labor personnel
d. educators
e. all of the above categories

PRETEST KEY

1. b
2. d
3. e
4. d
5. a
6. d
7. d
8. e
9. b
10. a
11. d
12. b
13. e
14. e
15. b
16. e
17. e

POSTTEST

1. In general terms needs assessment measures:

   a. the difference between what exists and what is desired.
   b. the weakness in your program.
   c. public reaction to your program.
   d. to what degree a program has been implemented.
   e. to what degree a need has been identified.

2. General education needs assessment : vocational needs assessment as

   a. students in general programs : students in vocational programs
   b. student needs : societal needs
   c. student needs : occupational needs
   d. student needs and societal needs : student needs and occupational needs
   e. needs of students, their parents, the community : manpower needs

3. Taba's approach to developing a teaching-learning unit involves the following steps (though not in this order):

   1. determination of what to evaluate and of the ways and means of doing it
   2. diagnosis of needs
   3. formulation of objectives
   4. organization of content
   5. organization of learning experiences
   6. selection of content
   7. selection of learning experiences.

   According to Taba, which step is the needs assessment process (Diagnosis of Needs)?

   a. Step 1
   b. Step 2
   c. Step 3
   d. Step 4
   e. Step 5

4. In general, the scope of vocational needs assessment can best be described as:

   a. varying in accordance with the scope of vocational programming.
   b. broad, to encompass an entire state or region.
   c. narrow, covering a school district.
   d. varying in accordance with the vocational discipline under consideration.
   e. broad, to include all districts and all vocational areas.

5. All of the following are identified as models which can be used for conducting educational needs assessment, EXCEPT:

   a. The Classic Model.
   b. The Inductive Model.
   c. The Deductive Model.
   d. The Delphi Model.

6. Which of the following statements about models for conducting needs assessment is NOT TRUE?

   Models for needs assessment:

   a. are generally adaptable for conducting vocational needs assessment.
   b. begin with the same information and have the same number of steps.
   c. are designed to produce information that compares the current condition to the desired condition.
   d. should involve representatives from all groups affected by the educational programs.

7. The Occupational Outlook Handbook provides the following information EXCEPT:

   a. nature of work.
   b. training and other qualifications.
   c. educational costs.
   d. places of employment.
   e. employment outlook.

8. To determine national employment trends for various occupations, the best source of information is:

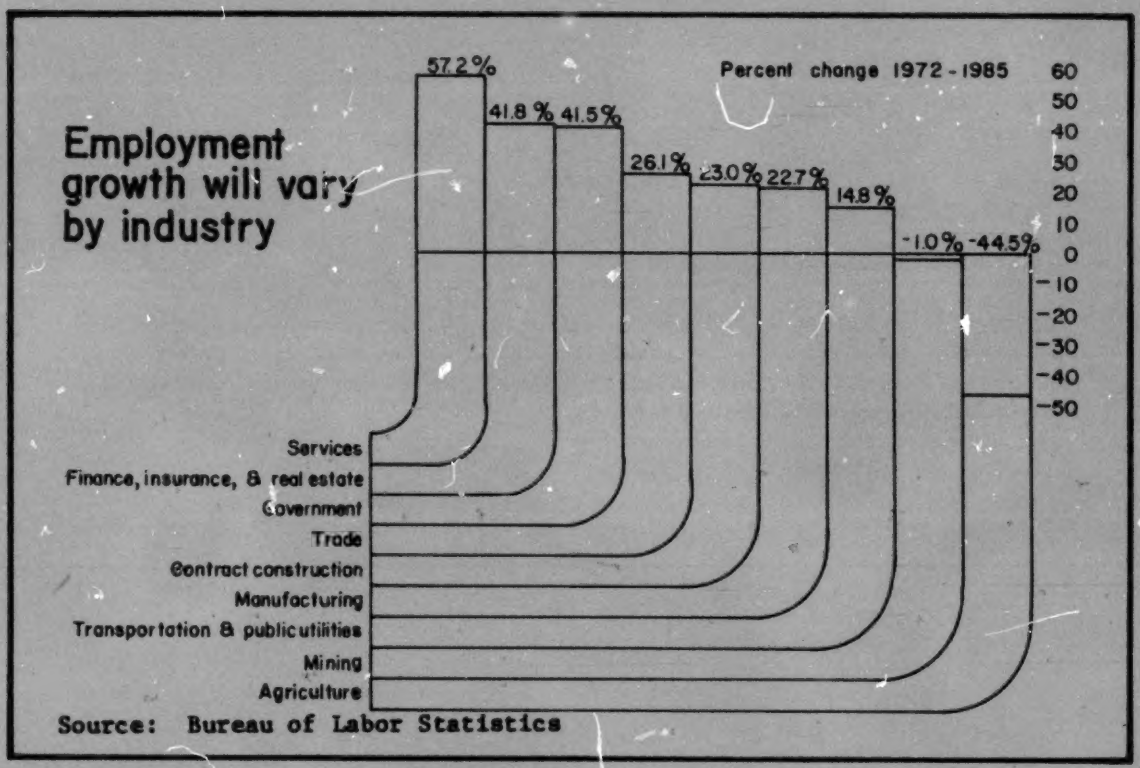
   a. The Occupational Outlook Handbook.
   b. The Dictionary of Occupational Titles, Vol. I.
   c. The Dictionary of Occupational Titles, Vol. II.
   d. Encyclopedia of Occupational Forecasts.
   e. The National Occupational Forecast Guidebook, Vol. 1-5.

9. Business locations, manpower information and demographic information can be acquired from:

   a. employment security offices.
   b. labor unions.
   c. chambers of commerce.
   d. business organizations.
   e. any of the above.

A CHANGING EMPLOYMENT PICTURE

1972-85



10. From the information on the graph above, which employment areas have the least amount of change?

1. mining
2. finances, insurance, and real estate
3. agriculture
4. transportation and public utilities

a. 1,4
b. 2,3
c. 1,3
d. 2,4
e. 1,2

11. Caution should be taken in utilizing manpower projections for vocational program planning because:

a. analysis of forecast data is subject to error.
b. unforeseen technological changes can influence manpower requirements.
c. instead of guiding program planners in the right direction, manpower forecasts are often misleading.
d. people interpret manpower statistics in different ways.
e. all of the above are true.

12. Which of the following characteristics are (is) common in identifying the handicapped student?

1. mentally retarded
2. speech impaired
3. crippled and health impaired
4. dependent upon social services

a. 4
b. 2, 4
c. 3
d. 1
e. 1, 2, 3, and 4

13. Which of the following categories of people would NOT be classified as disadvantaged?

1. migrants
2. institutional inmates
3. inner city youth
4. aged

a. 1
b. 3, 4
c. 3
d. 2
e. 4

14. Which of the following are appropriate sources of data for determining the needs and interests of students?

1. educational needs
2. social needs
3. emotional needs
4. physical needs

a. 1 and 2 only
b. 1, 2, and 3 only
c. 1 only
d. 1, 2, and 4 only
e. 1, 2, 3, and 4

15. Which of the following is the least valid use of information about student needs and interest?

    a. planning for instruction
    b. planning transportation routes
    c. developing curriculum
    d. evaluating entry-level competencies
    e. adapting programs to individuals

16. In planning a vocational needs assessment survey, which of the following instruments would offer the least usable information?

    a. Student Registration Form
    b. Vocational Interest Inventory
    c. Graduate Follow-Up Form
    d. Adult Educational Needs Survey Form
    e. Urban Vocational Opportunities Survey Form

17. Which of the following individuals are least helpful in organizing for a needs assessment at the community level?

    a. advisory committee members
    b. state staff personnel
    c. local school administrators
    d. local Chamber of Commerce staff
    e. local fire chief

POSTTEST KEY

1. a
2. d
3. a
4. a
5. d
6. b
7. c
8. a
9. e
10. a
11. e
12. e
13. a
14. e
15. b
16. a
17. e

GLOSSARY OF TERMS

LABOR FORCE:[1] the number of people in a designated geographical area who are either employed or seeking employment.

MANPOWER INFORMATION:[1] labor force data which pertains to rates of employed and unemployed, and characteristics such as sex, race, age, and geographic location.

MANPOWER PROJECTIONS:[1] an estimation of the number of persons needed and/or the number of persons available in the labor force or work force at some point in the future.

OCCUPATIONAL INFORMATION: data about types of occupations, including rates of employment, educational and training requirements, employment trends, nature of various occupations, working conditions, and earnings.

WORK FORCE:[1] the actual number of persons in a designated geographical area who are working.

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1 Sage, Marty (Labor Market Analyst). Personal Interview. Spokane, WA: Department of Employment Security, 1976.

PERFORMANCE OBJECTIVE 1

Provide a definition and rationale of the needs assessment process and differentiate between general and vocational needs assessment.

Explanation

A logical first step in the needs assessment process is an understanding of what a needs assessment is and why it is important. Armed with this information, the Vocational Education Curriculum Specialist can develop, with some confidence, a greater understanding of the process.

Instructional Objective 1.1

Given basic references relative to needs assessment, the Vocational Education Curriculum Specialist will develop a clearly written statement which defines needs assessment and explains its importance and place in the curriculum development process.

Learning Activity 1.1-a

Divide the class into diads (two students). Using references provided below, each diad will outline a 5-7 minute presentation on the needs assessment process. The presentation should include the following components:

1. an operational definition of needs assessment, and
2. an explanation of the importance and place of needs assessment in the curriculum development process.

Groups will outline the presentation for delivery to one of the following audiences:

1. vocational administrators,
2. vocational teachers,
3. parents,
4. business and industry advisory groups,
5. students, or
6. school board members.

References:

Bell, Terrel H. A Performance Accountability System for School Administrators. West Hyack, NJ: Parker Publishing, Inc., 1974. Chapter 2.

Kaufman, Roger A. Educational System Planning. Englewood Cliffs, NJ: Prentice Hall, Inc., 1972. Chapters 1-3.

Stoops, Emery; Rafferty, Max; and Johnson, Russell E. Handbook of Educational Administration. Boston: Allyn and Bacon, Inc., 1975. pp. 750-758.

Instructional Objective 1.2

The learner will differentiate between general and vocational needs assessment.

Learning Activity 1.2-a

Read the following narration which explains the differences in the needs assessment process for vocational and general education. Then answer the questions which follow.

Needs Assessment - General vs. Vocational Education

Most of the current literature on needs assessment refers to the collection of data about students and about society. These data are used as a basis for curriculum development in general education, e.g., restructuring the math program for grades 1-8, or justifying a reading program for community college

freshmen.

Much of the information needed for vocational needs assessment is gathered by a general needs assessment. Student enrollments, student achievements, census data, community concerns, and demographic information are all examples of data that are common to both types of needs assessment.

In vocational education, however, there is a concern about occupational information that is probably not shared by general educators. Vocational curriculum is tied to the demands and needs of the job market, as well as to student interest and needs. As a result, an assessment of vocational education needs should include additional student information such as student vocational interest surveys, mobility studies of program graduates, and vocational follow-up studies. Manpower information must also be considered: local, state, regional and national employment projections and vocational training requirements. Vocational needs assessment is based on student needs and occupational needs, thus providing a basis for curriculum development that reflects the needs of both learners and the environment in which they will work.

Questions:

1. How would you summarize the differences between general and vocational needs assessment?
2. Could a general needs assessment and a vocational needs assessment be combined into one process? Explain.

PERFORMANCE OBJECTIVE 2 ●●

Describe the scope and sequence of the needs assessment process.

Explanation

The range and use of needs assessment as a component of the vocational curriculum development process will vary for reasons of purpose, philosophy, resources and personnel. Thus the Vocational Education Curriculum Specialist should understand a variety of options where the needs assessment component can be located or relocated, modified or expanded.

Instructional Objective 2.1

Given instruction and opportunities for class discussion, the learner will identify an appropriate scope for needs assessment in a variety of vocational curriculum development situations.

Learning Activity 2.1-a

Below is a brief summary of the various scopes of needs assessment for learners. Read this summary before completing learning activities suggested at the conclusion of the discussion.

Summary

There is general agreement that needs assessment is a continuous process, and to be effective it must involve people with varied expertise. In addition, the needs assessment process can be conducted at a number of levels--the range of focus may be large or small.

A broad scope of needs assessment might be at the state or regional level. For instance, a state considering the establishment of area vocational schools will conduct a needs assessment for the entire state and for all aspects of the proposed curricula.

At the other extreme, one vocational teacher in a single school might want to establish a new vocational program. In writing a proposal for approval of that program, the teacher must rationalize its need, local employment opportunities, advisory committee support, student interest and follow-up. This is an example of a needs assessment that is limited in scope to one school district, to one vocational area, and to a small group of students.

Typically, needs assessment will either affect the total vocational program or an area within the total program.

Activities:

1. From your own experiences in vocational education, list examples of curriculum planning based on a needs assessment that was limited in scope. Broad in scope.
2. From your present knowledge of needs assessment, speculate on how the scope of needs assessment would alter the process.

Instructional Objective 2.2

Given selected references such as those listed below, the learner will select three (3) curriculum planning models and describe (orally or in writing) the following:

1. the sequence of the needs assessment within the curriculum development process, and
2. the reasons or purposes for the differences in sequence of needs assessment within the process.

Learning Activity 2.2-a

Look at various models for curriculum development and locate the stage in the process at which needs assessment would take place. Give the reasons or purposes for the differences in the sequencing.

References:

Kaufman, Roger A. Educational System Planning. Englewood Cliffs, NJ: Prentice Hall, Inc., 1972. Chapters 1 and 2.

Mager, Robert F., and Beach, Kenneth M., Jr. Developing Vocational Instruction. Palo Alto, CA: Fearon Publishers, 1967. Chapter 1.

Taba, Hilda. Curriculum Development: Theory and Practice. New York: Harcourt, Brace, and World, Inc., 1962. Chapter 22.

Tyler, Ralph. Basic Principles of Curriculum and Instruction. Chicago: The University of Chicago Press, 1975.

Resource:

Refer to Module 3 (Preparing for Curriculum Change): "A Description of a Tentative Model for Curriculum Development and Evaluation," p. 15.

Instructional Objective 2.3

Given a problem in vocational curriculum development, indicate the scope and sequence of needs assessment.

Learning Activity 2.3-a

Choose one of the case situations given on the following pages and design a model, or sequence of steps, for a curriculum development process which you consider suitable for the situation. Prepare a transparency showing the model or steps in the process. Defend your placement of the needs assessment in the model and indicate the extent (scope) of the needs assessment to be made. Consider these questions in developing your presentation:

1. What is the objective of this particular needs assessment?
2. List the kinds of information that will need to be collected.
3. What alternative curriculum development models are applicable to this problem?

4. Are there any political problems that will necessitate a modification of the model?
5. Are there any sociological problems that will necessitate a modification of the model?

Case Situation 1

You have recently been selected to serve as chairperson of a four-person vocational department in a small, four-year state college. Your department offers both undergraduate and graduate (Master's) degrees. In your initial evaluation of departmental procedure, you find no evidence of recent program planning or evaluation. Feedback from graduates of the program indicates that many of the courses now taught are providing outdated and irrelevant learning.

Case Situation 2

Federal and state monies are available to school districts for the development of skill centers. The guidelines indicate that a documented needs statement must accompany your proposal. This statement must include:

1. data on the skills currently provided by the school program, other educational agencies, and the private business sector;
2. documentation of vocational skills needed by employees in the region, and
3. an indication of student and parental interest in Vocational-Technical occupations.

Your school district has two senior high schools (9-12), 5 middle schools (5-8), and 9 elementary schools (K-4). The economy of the area is agri-business with some light industry. The city is the shopping and educational center, with the closest city of comparable size 150 miles away.

Also located in the community are a community college, a small private business college, and a private, church-sponsored, liberal arts college.

The composition of the community is predominantly white, middle class with approximately 4% Black, 1% Oriental, and 2% Chicano.

Community pressure has convinced some school board members that it would be desirable for the district to apply for the money. As the Vocational Technical Education Curriculum Director for K-14, you have been asked to develop and submit the proposal.

Case Situation 3

A large raw materials processing plant has just finalized plans to construct a $10,000,000 plant in your community, population 2,200. The vocational program currently emphasizes agriculture, business, and home economics. The plant director recently met with the school board and asked if the vocational curriculum could include co-op programs and a nucleus of courses which emphasize manufacturing, packaging, etc. The board has directed you to conduct a study and report to them at the next meeting.

PERFORMANCE OBJECTIVE 3 ●●●

Identify and evaluate various models for conducting needs assessment.

Explanation

There are various tested planning systems which will assist the Vocational Education Curriculum Specialist in planning for needs assessment. These systems or models can be used or adapted by the Vocational Education Curriculum Specialist and can serve as a guide to assist in orienting and training staff and support personnel to perform a comprehensive assessment of vocational needs.

Instructional Objective 3.1

Given appropriate references, the learner will prepare summaries of three models of the needs assessment process. The summaries should describe and compare the models and should specify their utility and adaptability to vocational needs assessment.

Learning Activity 3.1-a

Locate three needs assessment process models and prepare a summary of each one, using the references below (or other references which describe models for needs assessment).

To be complete, summaries should include the following elements:

1. a brief description,
2. comparison and contrast of the components of the models,
3. situations in which the various models would be most useful, and
4. specification that the models are adaptable to vocational needs assessment.

References:

Kaufman, Roger A. Educational System Planning. Englewood Cliffs, NJ: Prentice Hall, Inc., 1972. Chapter 3.

Nebraska Research Coordinating Unit for Vocational Education. Procedure for Determining Vocational Education Needs Through Community Analysis. Lincoln, NB: University of Nebraska, 1968. ED 023 916.

PERFORMANCE OBJECTIVE 4 ●●●●

Identify sources of available local, state, regional and national manpower data.

Explanation

Most needs assessment information required for local vocational curriculum planning has already been collected by various agencies. An essential skill of the curriculum specialist is the ability to identify the source of this information and find out how it can be obtained.

Instructional Objective 4.1

Given sources of information, the learner will identify data useful for a vocational program for a local school district, community college or agency.

Learning Activity 4.1-a

Individually or in small groups, identify the type of information various organizations and agencies could provide to help with the planning of vocational education programs. If there are questions regarding type of information available from the following list, plan to interview persons from the organization or agency.

-Census bureau

-Chamber of Commerce

-Business organizations

-Professional organizations

-Industry

-Military

-Labor unions

-Employment security

-Conservation-Environment agencies

-Educational institutions

-Media (newspapers, TV, radio)

-Recreational and Ecological agencies

-Literacy, Adult Basic Education, or Right to Read Programs

-State Department of Education

-Welfare departments

-Community planners

Instructional Objective 4.2

The learner will identify sources of manpower data and describe major occupational trends.

Learning Activity 4.2-a

View the slide presentation, "Looking Ahead to a Career, Manpower Projections, 1972-1985."

Using the Occupational Outlook Handbook for further detail, summarize the current and future job trends in the vocational areas of:

1. communications,
2. food processing,
3. construction,
4. health services, and
5. transportation.

References:

U. S. Department of Labor, Bureau of Labor Statistics. "Looking Ahead to a Career" (slide series). Washington, DC: U. S. Government Printing Office, 1975. (Available from regional offices of the Bureau of Labor Statistics.)

U. S. Department of Labor, Bureau of Labor Statistics. Occupational Outlook Handbook. (biannual) Washington, DC: U. S. Government Printing Office.

PERFORMANCE OBJECTIVE 5 ●●●●●

Utilize appropriate manpower data and forecast information in making recommendations for curriculum change.

Explanation

National occupational needs are reflected in the manpower data collected and disseminated by the U.S. Department of Labor. The ability to find and interpret this information is essential to anyone who attempts to develop realistic vocational curricula. Since these curricula must reflect future as well as present needs, the curriculist should know how manpower forecasting is accomplished.

Instructional Objective 5.1

Using data from appropriate manpower resources, the learner will interpret the employment outlook through the current long range forecasting period for one occupation in each of the unskilled, semi-skilled and skilled classifications of the labor force.

Learning Activity 5.1-a

Interpret national, regional, state and local needs projected through the current long range forecasting period for one occupation in each of the following classifications:

1. unskilled,
2. semi-skilled, and
3. skilled.

References:

Goldstein, Harold. "America's Manpower Needs for the Seventies, Clues to Tasks Ahead." American Vocational Journal 46 (April 1971): 18-25.

"U. S. Labor Force: Projections, 1985." Monthly Labor Review 93 (May 1970): 3.

Resources:

Department of Labor publications:

U. S. Department of Labor, Bureau of Labor Statistics. Occupational Outlook Handbook. Washington, D.C.: U. S. Government Printing Office. (biannual)

_____. "Looking Ahead to a Career." (slide series) Washington, D.C.: U. S. Government Printing Office, 1975. (Available from regional offices of the Bureau of Labor Statistics.)

_____. Occupational Outlook Quarterly. (all volumes) Washington, D.C.: U. S. Government Printing Office.

U. S. Department of Labor, Manpower Administration. Manpower. (all volumes) Washington, D.C.: U. S. Government Printing Office.

U. S. Department of Labor. Manpower Report to the President. Washington, D.C.: U. S. Government Printing Office. (annual)

Also: Bulletins from the Bureau of Labor Statistics.

Local and Regional:

Information from local and state Employment Security Office (monthly bulletins, local labor market developments, State labor market developments).

Results from state and local surveys.

Manpower, employment, industry.

Instructional Objective 5.2

Given appropriate references, the learner will prepare a brief written comparison of two methods of forecasting in vocational education.

Learning Activity 5.2-a

Two methods of forecasting in vocational education are Trend Extrapolation and Econometric Techniques. Use the following references to prepare a brief comparison of the two. To be complete, the discussion should compare the following characteristics:

1. pros and cons,

2. simplicity,

3. relative accuracy, and

4. methods of utilization.

References:

Kidder, David. Review and Synthesis of Research of Manpower Forecasting for Vocational-Technical Education. Columbus, OH: Center for Vocational Education, 1971. ED 060 183.

Mehmet, Ozay. Methods of Forecasting Manpower Requirements with Special Reference to the Province of Ontario. Ottawa: Ontario Department of Labor, 1965. ED 022 896.

Young, Robert C.; Clive, William V.; and Miles, Benton E. Vocational Planning: Manpower Priorities and Dollars. Final Report. Columbus, OH: Center for Vocational Education, 1972. ED 062 515.

Instructional Objective 5.3

The learner will explain why vocational educators should use caution in using manpower predictions as a basis for program planning.

Learning Activity 5.3-a

After reading the references listed below, list reasons why a curriculum specialist should be cautious about using projected manpower information in program planning.

References:

Crum, Dwight R. "Implications for Planning Vocational Education Resources." American Vocational Journal Vol. 46, No. 4. (April 1971): 26-29.

O'Donnell, Edward T. "Occupational Statistics: Some Thoughts for Uncertain Users and Producers." American Vocational Journal Vol. 51, No. 4. (April 1976): 40-43.

Somers, Gerald G. "Critique of Manpower Projections for Instructional Staff in Vocational Education." Edited by Rupert N. Evans and David R. Terry. Changing the Role of Vocational Teacher Education. Bloomington, IL: McKnight and McKnight, 1971.

Instructional Objective 5.4

Given a situation which outlines a divergence in projected data, the

learner will analyze and discuss such divergence.

Learning Activity 5.4-a

Individual or class activity

Current readings about job prospects for the future are filled with citations forecasting the need for workers in all of the health occupation fields. There is a recommendation for expansion of existing programs and the development of new ones. A 1974 study in Washington State, however, revealed a surplus of workers in the medical laboratory field.

What are possible explanations for these seemingly divergent data?

If you were state director of Health Occupations, how would you resolve this apparent conflict in your plan for new programs in the medical laboratory field?

If you were an employer of medical laboratory personnel, what might your reaction be to proposed training programs in this field? What if you were a medical laboratory worker?

Instructional Objective 5.5

The student will translate manpower data into information which can be used by vocational teachers and administrators.

Learning Activity 5.5-a

Develop a presentation to vocational teachers and administrators which will translate factual manpower data into meaningful information. Provide some type of mediation to explain what manpower data can say to a vocational educator.

Evaluation of this simulated presentation may be made by students and teachers. The presentation should include

several (3-5) generalizations or guidelines to help teachers use factual data in their own vocational classes.

References:

U. S. Bureau of the Budget. Standard Industrial Classification Handbook. Washington, D.C.: U. S. Government Printing Office, 1972.

U. S. Department of Labor. Dictionary of Occupational Titles Vol. I and Vol. II. Washington, D.C.: U. S. Government Printing Office, 1965.

Examples of Planning Tasks and Suggested Manpower Information (on the next page).

Instructional Objective 5.6

The learner will be able to solve realistic problem-situations by analyzing manpower and program information and making recommendations for curriculum change.

Learning Activity 5.6-a

If this objective (Instructional Objective 5.6) is appropriate for the learner, refer to Module 1, "Developing Curriculum: Goals, Objectives and Instructional Plans," Instructional Objective 1.3. The Learning Activity 1.3-a from that module will meet its accompanying objective as well as this objective, since they are closely related.

Examples of Planning Tasks and Suggested Manpower Information

PLANNING TASK	TYPE OF MANPOWER INFORMATION
Selecting Broad Program Areas	Forecasting Employer Surveys Trend Extrapolation Econometric Techniques Job Vacancy-Occupational Outlook Target Population Characteristics
Selecting Curriculum Content	Occupational Analysis Task Inventory Job Functions Analysis
Developing Occupational Guidance	Occupational Information Work Values General Information about the World of Work
Job Placement	Entry Openings Hiring Standards Entry Barriers
Evaluation Feedback	Follow-up Studies

PERFORMANCE OBJECTIVE 6

Identify the special needs of students for the development of appropriate vocational program alternatives for minorities, handicapped and other disadvantaged students.

Explanation

There is a big difference between "what is" and "what ought to be" in the education of disadvantaged and handicapped students. This difference equals the educational needs of these students, needs which must be considered when planning educational programs of any kind. Recent legislation has made the meeting of these needs not only a moral but a legal obligation of the public schools. Therefore, it is essential that the vocational curriculum specialist be familiar with the current legislation and the special needs of these students. As a potential resource person, the Vocational Education Curriculum Specialist must also work out ways to develop or modify the learning environment to meet the needs of the disadvantaged and handicapped.

Instructional Objective 6.1

Given a source of information, the learner will identify the vocational needs of disadvantaged and handicapped students and project programs for meeting their needs.

Learning Activity 6.1-a

Read the definitions for a disadvantaged person and a handicapped person given below, then discuss the special needs these people have.

Disadvantaged Persons,[2]

Persons who have academic, socio-economic, cultural or other disadvantages that prevent them from succeeding in regular Vocational Education or Home and Family Life programs designed for persons without such disadvantages,

and who for that reason require specially designed educational programs or related services. The term includes persons whose needs for such programs or services result from poverty, neglect, delinquency, or cultural or linguistic isolation from the community at large, but does not include physically or mentally handicapped persons as defined below unless such persons also suffer from the handicap described in this paragraph.

Handicapped Persons,[3]

People having a physical or mental disability such as hard of hearing, deaf, partially seeing, blind, or orthopedically handicapped, neurologically impaired, mentally retarded and emotionally and socially maladjusted.

Learning Activity 6.1-b

Study copies of the 1968 Amendments to the 1963 Vocational Act (or latest Vocational Education Acts). As a group, develop a 15 minute presentation on the implications for these laws on vocational education programs. Your presentation should answer such questions as:

1. What categories of special students are covered by the law?
2. Are specific changes in educational programs mandated, and if so, what are the changes?
3. Does current legislation provide for program modification?
4. What changes in vocational education took place as a result of the law?

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[2] Washington State Superintendent of Public Instruction, in the "Application Criteria for Special Projects #764," Section 76-4 of the District-Wide Plan for Vocational Education 1976-77 School Year. Olympia, WA, 1976.

[3] Ibid.

Instructional Objective 6.2

The learner will identify educational needs for different types of disadvantaged students and will specify ways that vocational programs might meet their needs.

Learning Activity 6.2-a

Arrange to visit programs that are effectively meeting the areas of disadvantaged and handicapped students. Contact your State Coordinator for Disadvantaged and Handicapped for recommending programs to visit. Prior to visiting programs, select and read from the list of references those which will fulfill your area of interest.

Learning Activity 6.2-b

Individual Activity

Use the worksheet on the next page to direct your reading on the following references.

References:

Feck, Vincent. What Vocational Education Teachers and Counselors Should Know About Urban Disadvantaged Youth. Columbus, OH: Center for Vocational Education, 1971. ED 059 531.

Kemp, Barbara H. The Youth We Haven't Served. A Challenge to Vocational Education. Washington, DC: Office of Education, Department of Health, Education and Welfare, 1966. ED 016 055.

Lockette, Rutherford E., and Davenport, Lawrence F. Review and Synthesis of Research on Vocational Education for the Rural Disadvantaged. Columbus, OH: Center for Vocational Education, 1971. ED 058 391.

Miller, David H., and Berry, Suzanne. Disadvantaged Youth: Answers to Questions on Vocational and Technical Education. Columbus, OH: Center for Vocational Education, 1972. ED 074 228.

Oaklief, Charles. Review and Synthesis of Research on Vocational and Technical Education for the Disadvantaged. Columbus, OH: ERIC Clearinghouse for Vocational and Technical Education, 1971. ED 058 390.

Ohio Center for Vocational Education. Third Annual National Vocational-Technical Teacher Education Seminar Proceedings, Teaching Disadvantaged Youth. Columbus, OH: Center for Vocational Education, 1970. ED 037 540.

Robinson, Oliver W., and Schmitt, Henry E. What School Administrators Should Know About Vocational Education for Disadvantaged Youth in Rural Areas. Columbus, OH: Center for Vocational Education, 1971. ED 057 181.

Schroeder, Paul. Vocational Education for the Handicapped: A Bibliography of ERIC Documents. Bibliography Series #20. Columbus, OH: Center for Vocational Education, 1973. ED 083 480.

Sharp, Laura. "Vocational Education for the Disadvantaged Groups." Edited by Gerald G. Somers and J. Kenneth Little. Vocational Education: Today and Tomorrow. Madison, WI: Center for Studies in Vocational Technical Education, University of Wisconsin, 1971.

Walker, Robert. What Vocational Education Teachers Should Know About Disadvantaged Youth in Rural Areas. Columbus, OH: Center for Vocational Education, 1971. ED 059 352.

(Worksheet for Learning Activity 6.2-b)

Study Guide - Special Needs

Each category of disadvantaged student has special curricular needs which should be met by their educational programs. For each of the following categories, identify at least four educational needs and specify how a vocational curriculum might meet each need.

CATEGORIES	EDUCATIONAL NEEDS	VOCATIONAL INTERVENTION
RURAL DISADVANTAGED		
	1.	
	2.	
	3.	
	4.	
	5.	
MENTALLY RETARDED		
	1.	
	2.	
	3.	
	4.	
	5.	
BEHAVIOR DISORDERS (Emotionally Disturbed)		
	1.	
	2.	
	3.	
	4.	
	5.	

ORTHOPEDICALLY HANDICAPPED

1.

2.

3.

4.

5.

ETHNIC MINORITIES

1.

2.

3.

4.

5.

PERFORMANCE OBJECTIVE 7 ●● ●●●●●

Develop a plan for determining the needs and interests of students.

Instructional Objective 7.1

The learner will develop a plan for determining student interest and needs.

Learning Activity 7.1-a

Refer to:

Module B-1
"Determine Needs and Interests of Students"
Professional Vocational Teacher Module
The Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210, September 1975.

This module provides information and activities relating to student needs. Read the introductory material and determine your needs relating to the module. Then complete the appropriate activities (if any) for Learning Experiences I - III. In lieu of Learning Experience IV, develop an outline that explains how you would determine the needs of students in a school district. Your plan should include personnel involved and data gathering instruments (note additional examples in Appendix).

PERFORMANCE OBJECTIVE 8 ●●● ●●●●●

Demonstrate the ability to plan for the collection of local needs assessment data.

Explanation

When, in the course of curriculum planning, it becomes necessary to conduct a needs assessment, one may find that many of the needs have already been identified, and thus the information is available. On the other hand, the curriculum specialist may also find that there are gaps in the information--gaps the specialist is forced to fill with a needs assessment survey.

The following activities are designed to enable the curriculum specialist to plan a needs assessment survey when and if the occasion arises.

Instructional Objective 8.1

Introductory Activity

The learner will describe current data collection techniques for program planning and development.

Learning Activity 8.1-a

Alternative 1 - Class Activity

GUEST SPEAKER: Invite a specialist in data collection for community development programs to serve as a resource person and to present current techniques used in their agency, business or industry.

Alternative 2 - Individual Activity

Assign individuals to prepare questions and interview individuals engaged in program planning and development with various groups and agencies. The purpose of this interview will be to determine what approach and instruments are used to gather data for setting and prioritizing goals.

Instructional Objective 8.2

Given a specific situation, the learner will plan an appropriate needs assessment survey.

Learning Activity 8.2-a

Consider the following case situation:

You have been hired as a vocational education curriculum specialist in a district that is considering the development of an area vocational school. Your instructions are to work with students, community members, and staff to determine the labor market needs, student interests and community facts, in order to make recommendations for vocational programs.

Use the resources and outline below to plan a needs assessment survey to meet the requirements of your situation.

Resources:

Nebraska Research Coordinating Unit for Vocational Education. Procedure for Determining Vocational Education Needs Through Community Analysis. Lincoln, NB: University of Nebraska, 1968. ED 023 916.

Local references which outline and describe a planning process for vocational education needs assessment.

Outline:

1. Describe the needs assessment model to be used.
2. Identify the kinds of people who would be involved in data collecting.
3. Define the scope of the study, considering restraints of time, money, personnel, etc.
4. Describe the data-gathering devices and/or forms to be used (additional examples can be found in Appendix).
5. Describe a plan for summarizing and presenting the findings.

PERFORMANCE OBJECTIVE 9

Analyze and interpret needs assessment data relevant to the development of vocational curricula.

Explanation:

Needs assessment is a costly and time consuming process. Unless comparable time and effort is expended on the data which results, the entire assessment may be wasted. The following activities involve the learners with analyzing and prioritizing needs assessment information and interpreting such information to others.

Instructional Objective 9.1

Given appropriate needs assessment information (community survey results, manpower data, demographic information, student needs and interest data), the learner will analyze and synthesize the information, state implications for vocational program change, and outline a report to interpret the information to a school board.

Learning Activity 9.1-a

Group or individual activity

1. Refer to the data forms on the following pages:
   a. Aurora Demographic Information
   b. Average Annual Occupational Demand for Ten Job Groups
   c. Vocational Interest of Students and Adults
   d. Student Needs Survey
   e. Prioritized list of educational goals developed by a community survey.
   f. Description of vocational facilities and programs

2. In groups of 3-6 students,[4] first summarize the major findings of each reported survey:
   -Student Needs
   -Occupational Demand
   -Vocational Interest
3. Analyze and discuss the interrelationships of survey results and other information as they relate to the present program.
4. State implications regarding curriculum change in the vocational programs.
5. Outline the format and subject matter of a report to be submitted to the school board recommending vocational changes based on the given needs assessment information.
6. Compare results with other groups as a source of class discussion and conclusion.

[4] This activity is primarily designed as a group activity, since the analysis of needs assessment data is traditionally a group process. If necessary, however, the activity could be completed by individuals.

Demographic Information

Aurora, a community of approximately 5,000 population, is located 35 miles from Duburg (population 181,000). Aurora has grown steadily in recent years due to the number of families who have moved out of the urban population center. Aurora has attracted two national retail franchise headquarters and a major shopping mall.

The area surrounding Aurora has traditionally been agricultural. However, during the past five years much of the surrounding land has been purchased for housing and commercial use. The population is described as being principally middle and lower middle class. The mean educational attainment is 12.2 years.

Average Annual Occupational Demand [5]
for Ten Job Groups

	JOB GROUP	DEMAND
1.	Clerical Occupations	High
2.	Sales Occupations	High
3.	Food Services Occupations	Medium
4.	Personal Service Occupations	Medium
5.	Protective and Building Services Occupations	Medium
6.	Craft Occupations	Medium
7.	Transportation and Utilities Occupations	Low
8.	Extractive Industry Occupations	Low
9.	Manufacturing Processing Occupations	Low
10.	Material Handling Occupations	Medium

[5] Average Annual Occupational Demand refers to the number of positions of average annual growth and average annual replacement for the job categories.

Vocational Interest of High School Students and Adults

POPULATION	STUDENTS	ADULTS
Want job training	30%	15%
Do not want job training	70%	85%
JOB GROUP		
1. Clerical Occupations, (secretaries, clerk-typists, bookkeepers, bank tellers, telephone operators)	8.0	2.3
2. Sales Occupations (apparel, transportation, equipment, and miscellaneous salespeople)	4.3	3.1
3. Food Service Occupations (waiter, waitress, bartender, meatcutters, cooks, etc.)	2.7	1.3
4. Personal Service Occupations (hotel/hospital maids, barbers and beauticians, laundering occupations)	1.8	.7
5. Protective and Building Service Occupations (guards, firemen, policemen, janitors, grounds keepers)	2.2	1.8
6. Craft Occupations (auto mechanic, other mechanics, carpenters, sheet metal workers, electrical workers, plumbers)	3.7	1.8
7. Transportation and Utilities Occupations (truck drivers, service station attendants, telephone repair, utilities production)	3.0	1.0
8. Extractive Industry Occupations (forestry occupations, logging occupations)	1.3	.8
9. Manufacturing Processing Occupations (wood processing occupations, food processing, ore and metal processing, chemicals and fuels processing, textile processing)	2.0	1.2
10. Material Handling Occupations (packaging occupations, housing and conveying, moving and storing, miscellaneous material handling)	1.0	.8

Student Needs Survey

1. Aurora Follow-up Study (Classes from last year, and 2, 4, 6, and 8 years ago).

This study, conducted last summer, dealt with dropouts and with a ten percent (10%) random sample of graduates from the classes listed above. The study involved two phases: (1) a records search and (2) a survey of facts and opinions. Data from this study, relevant to the needs listed above, are as follows:

a. Twenty-one percent (21%) of the former students who responded said that teachers are seldom or never concerned with them as individuals. These respondents apparently felt that a communications gap existed.

b. Family problems and school problems were two of the three most often listed reasons for dropping out of school. (Marriage was not defined on a statistical basis and may have been quite varied, but the fact that so many dropouts marked these two points indicates that a breakdown in parent/student/teacher rapport is a critical factor in the dropout problem.)

c. Former students showed a marked preference for "skills" over "content" courses. They listed English, math, typing, home economics, and speech most often as being "most useful" courses. Biology and history (both required content courses) were singled out most often as being least useful, along with foreign language.

These former students seemed to be saying that they gained more from "relevant skills courses" than from ones that gave them ready made information and opinions.

d. Several spontaneous comments (at least 50) stated or implied that the schools need to do more to prepare students to better function in the

"adult world". (The specific content of these comments was quite varied, of course.)

2. Needs Studies Conducted in Conjunction With This and Related Studies

a. Student Questionnaire: A random sample (147 students) of present students responded to the following questions:

(1) My parents take an active interest in my school affairs (school work, social activities.)

36%	a. Most of the time	27%	c. Sometimes
19%	b. Often	18%	d. Seldom

(2) Faculty members take an active personal interest in me.

19%	a. Most of the time	40%	c. Sometimes
19%	b. Often	22%	d. Seldom

(3) Other adults in the community take an active, personal interest in me.

6%	a. Most of the time	44%	c. Sometimes
20%	b. Often	30%	d. Seldom

(4) I take part in the activities of my classes (class discussions, presentations).

30%	a. Most of the time	29%	c. Sometimes
30%	b. Often	11%	d. Seldom

(5) I take part in the school activity program (drama, sports, journalism, clubs).

23%	a. Most of the time	23%	c. Sometimes
24%	b. Often	30%	d. Seldom

(6) The students in this school (excluding personal friends) are friendly.

31% a. Most of the time 32% c. Sometimes

24% b. Often 13% d. Seldom

(7) I would like to participate in making important group decisions (setting class rules, school rules, club rules, etc.) more often than I presently do.

80% a. Yes 12% b. Neutral 8% c. No

b. Student/Faculty/Patron Structured Interviews:

Structured interviews with twenty-four arbitrarily chosen high school students, nine arbitrarily chosen junior high school students, fifteen arbitrarily chosen teachers, and ten arbitrarily chosen patrons were conducted. Following are the percentage responses to the questions asked:

	Students		Teachers		Patrons	
	Yes	No	Yes	No	Yes	No
(1) Should community members be involved in planning and executing educational programs?	82	18	72	28	72	30
(2) Should students have a greater number of educational experiences in the community than they now do?	76	24	86	14	60	40
(3) Is a lack of community involvement a serious educational problem?	82	18	72	28	60	40
(4) Should education be made relevant by centering educational experiences in the community?	82	18	86	14	60	40

c. Faculty Questionnaire. Teachers on the faculty were asked to respond to the following questions. Thirty-nine (39) responded.

(1) The number of parents who, in the past term, have visited my classroom during normal class activities is nearest to:

87% a. 0 11% b. 5 2% c. 10

____ d. 25 ____ e. 50 ____ f. over 50

(2) Of the parents who should have contacted me last semester concerning their youngster's educational progress, the percent who actually did is nearest to:

47% a. 0% 39% b. 5% 10% c. 10% ____ d. 25%

4% e. 50% ____ f. 75% ____ g. 100%

(3) The percent of students who participate actively in my classes (take part in class discussions, make presentations, hand in their assignments without pressure) is nearest to:

____ a. 0% 5% b. 5% ____ c. 10% 5% d. 25%

31% e. 50% 50% f. 75% 9% g. 100%

(4) The percent of students in my classes who are presently functioning as relatively effective independent, self-directed learners is nearest to:

____ a. 0% 13% b. 5% 13% c. 10% 23% d. 25%

20% e. 50% 29% f. 75% 2% g. 100%

(5) The percent of students in my classes who are capable of functioning as relatively effective independent, self-directed learners is nearest to:

____ a. 0% ____ b. 5% 11% c. 10% 17% d. 25%

25% e. 50% 39% f. 75% 8% g. 100%

Prioritized List of Educational Goals from Community Survey

Goals in order of descending priority:

1. Develop skills in reading, writing, speaking, and listening
2. Develop good character and self respect
3. Develop skills to enter a specific field of work
4. Gain a general education
5. Develop a desire for learning now and in the future
6. Develop pride in work and a feeling of self worth
7. Learn how to examine and use information
8. Gain information needed to make job selection
9. Learn how to use leisure time
10. Appreciate culture and beauty in the world
11. Practice and understand the ideas of health and safety

DESCRIPTION OF VOCATIONAL FACILITIES AND PROGRAMS

City of Aurora

High School

Facilities

Four-year high school for 500 students

Programs:	Length	Enrollment
Typing and Shorthand	36 wks	18
Bookkeeping	"	15
Intro. to Agriculture	"	16
Crop and Soil Technology	"	14
Animal Husbandry	"	14
Family living	"	15
Consumer homemaking	"	16

Community College

Facilities

School is a remodeled military base.

Total enrollment (day and evening classes) 1000

Program	Length	Enrollment
Auto Mechanics	12 mo.	20
Assoc. Degree Nurse	24 mo.	15
Nurse Aide	2 mo.	20
Secretarial	4 mo.	20

APPENDIX

1972 WEST CENTRAL INDIANA

VOCATIONAL AND TECHNICAL EDUCATION SURVEY

PARENTS' QUESTIONNAIRE

Dear Parents:

The schools of eight counties in this area are conducting a survey to study the present and future needs and resources for vocational and technical education, in order to best serve you and your children. You are invited to participate in this study and to express your viewpoints by completing the following questionnaire immediately, and having your child return it to his or her teacher.

One possible outcome of this study could be an area vocational school. The primary function of such an area school would be to provide high school juniors and seniors with a large variety of specialized courses intended to prepare them to enter the working world immediately after graduation with a special skill or trade. In most cases the student would attend the area school for a half day with the other half day spent in his or her home school activities. An area vocational school could also provide training for high school drop-outs, recent graduates, and other adults who would like to improve their current skills or learn new skills to be eligible for a different job.

Any additional comments you may wish to make concerning vocational and technical education for this area may be made on a separate sheet of paper and stapled to this questionnaire. Such comments will be appreciated and <u>will be read</u> and considered. Thank you for the time and thought you will put into completing this questionnaire. Your response will contribute much to this project and is sincerely appreciated.

- Number of children: _____below school age, ____in grades 1-8, _____in grades 9-12, ____above school age.

- In what occupation are you presently engaged?

  Father_____ Mother_____

- Do you believe there is a need for additional vocational/technical education in this area? ___Yes ___No

- Do you believe there is a need for an area vocational/technical school as described above? ___Yes ___No

- Would you encourage your children to enroll for courses in an area vocational technical school if it is available when they are high school juniors and seniors?

  ___Yes ___No Why?_____

- Would you be interested in an adult class to improve your occupational skills?

  Father: ___Yes ___No Mother: ___Yes ___No

- If your answer to the question above is YES, what type of program would you most desire?

Father	Mother	Type of Program
_____	_____	regular day-school vocational-technical courses
_____	_____	vocational technical classes held in the evening
_____	_____	comprehensive high school program (academic plus some vocational courses
_____	_____	cooperative school-work program (part-time in school, part-time at work)
_____	_____	short-term (1-6 weeks) specialized vocational or technical program during the day
_____	_____	other

- If your answer above was YES, please indicate your interest in any of the following occupational areas in which you would like to attend a training program. If you have more than one choice, please mark them 1, 2, 3, etc., in order of your preference. If an area in which you have an interest is not listed, please

add it in the blanks provided.

Mother	Father		
_____	_____	1.	Accounting or Bookkeeping
_____	_____	2.	Agricultural Machinery Technology
_____	_____	3.	Agricultural Sales and Service
_____	_____	4.	Appliance Repair
_____	_____	5.	Auto Mechanics and Truck Mechanics (non-diesel)
_____	_____	6.	Auto Body Repair and Service
_____	_____	7.	Aircraft Mechanics
_____	_____	8.	Beauty Culture, Barbering
_____	_____	9.	Building Maintenance
_____	_____	10.	Business Machines Operation
_____	_____	11.	Carpentry
_____	_____	12.	Child Care
_____	_____	13.	Commercial and Advertising Art
_____	_____	14.	Computer Programming and Operation
_____	_____	15.	Computer Repair and Maintenance
_____	_____	16.	Custodial and Maintenance Service
_____	_____	17.	Data Processing or Keypunch
_____	_____	18.	Dental and Medical Technology
_____	_____	19.	Diesel Mechanics
_____	_____	20.	Drafting and Design
_____	_____	21.	Electrical Appliance Repair
_____	_____	22.	Electricity
_____	_____	23.	Electronics Technology
_____	_____	24.	Farm Operation and Management
_____	_____	25.	Floriculture

_____ _____ 26. Food Preparation and Service

_____ _____ 27. Greenhouse Management

_____ _____ 28. Health Aid

_____ _____ 29. Heavy Machinery Operation

_____ _____ 30. Heavy Machinery Repair and Maintenance

_____ _____ 31. Laboratory Technician

_____ _____ 32. Landscaping and Horticulture

_____ _____ 33. Law Enforcement

_____ _____ 34. Licensed Practial Nursing

_____ _____ 35. Machine Shop Trades

_____ _____ 36. Masonry-Cement, Tile, Brick

_____ _____ 37. Office - Typist, Receptionist, File Clerk

_____ _____ 38. Office Management and Supervisor

_____ _____ 39. Painting and Finishing

_____ _____ 40. Plastering

_____ _____ 41. Plumbing and Heating

_____ _____ 42. Practical Nursing

_____ _____ 43. Printing Trades

_____ _____ 44. Radio and Television Repair

_____ _____ 45. Retailing (Store and Sales Occupations)

_____ _____ 46. Refrigeration and Air Conditioning

_____ _____ 47. Secretarial or Stenographic

_____ _____ 48. Sheet Metal Work

_____ _____ 49. Small Engine Repair

_____ _____ 50. Textile Fabrication (Clothing Manufacture and Repair)

_____ _____ 51. Tool and Die Work

_____ _____ 52. Trucking and Truck Driving

_____ _____ 53. Upholstering

_____ _____ 54. Welding

_____ _____ 55. Woodworking and Cabinetry

_____ _____ 56. _____

_____ _____ 57. _____

_____ _____ 58. _____

_____ _____ 59. _____

_____ _____ 60. _____

1972 WEST CENTRAL INDIANA

VOCATIONAL AND TECHNICAL EDUCATION SURVEY

STUDENT OCCUPATIONAL INTEREST INVENTORY

Student: The school corporations of eight counties in this section of Indiana are gathering information to help plan for students such as you who are now several years behind in school. Your honest responses to the following questions will be very helpful in that planning. If you wish to make additional comments, please do so on a separate sheet of paper and staple it to this form. Such comments will be very helpful and they will be READ and CONSIDERED.

Please place a check ( ) before each choice that is best for you, or write in a short answer.

Name:_____ School:_____ Sex: ___male ____female

Grade: ___9 ____11 I plan to graduate from high school. ___Yes __No

The high school program in which I am now enrolled is:

_____college preparatory

_____business-commercial

_____vocational-technical

_____general

_____other

The occupation I think I would like to enter upon completion of my education is:

_____ _____

After I leave high school, I now plan to:

_____attend a vocational-technical school

_____attend a business school

_____attend a nursing school

_____attend a junior (two-year) college

_____attend a four-year college or university

_____seek full-time employment

_____enter military service

_____enter an apprenticeship program

_____become a full-time homemaker

_____have not yet decided

_____Other_____

If my high school offered (or does offer) courses preparing me for employment immediately after graduation, I would (or do) plan to enroll in one or more of these courses. ___Yes ___No

I would be willing to travel a reasonable distance to a vocational school for part of each school day if the courses, referred to above, were not offered in my high school. ___Yes ___No

The courses and programs I want are available to me in my high school. ___Yes ___No; if NO what additional types of courses or programs would you like to have available?

_____

I feel that enough of my high school courses are (or will be) directed toward doing what I want to do when I leave high school. ___Yes ___No

I feel that I am well informed about the number of careers (jobs) open to me. ___Yes ___No

I am well informed about what training or education is required for various careers (jobs) in which I am interested. ___Yes ___No

When you begin to work full time, how far do you plan to live from where you now live?

___within 50 miles

___50-100 miles

___more than 100 miles

From what source have you received most of your information about careers?

___parents

___teachers

___counselors

___other high school students

___older friends

___other_____

Please label each of the following as:

A = I have taken or am taking this type of course.

B = I expect to take this type of course during high school

C = I would take this type of course if offered in high school

D = I have no interest in this type of course

_____Trade and Industrial Education (example: Auto Mechanics, Television Repair, etc.)

_____Business Merchandising, Store and Sales Occupations (example: Accounting, Office Practice, Sales, Management, etc.)

_____Technologies (example: Metallurgical, Construction, etc.)

_____Food and Clothing (example: Nutrition, Restaurant Service, Clothing and Textiles, etc.)

_____Agriculture (example: Crop Production, Florist, Landscaping, etc.)

_____Public Service Education (example: Police Work, Postal Service, etc.)

_____Health Services Education (example: Practical Nursing, Dental Technician, Laboratory Technician, etc.)

_____Other_____

_____Other_____

(Subject areas of interest to you which may have been omitted from the above listing; be sure to code each of these as A, B, or C.)

Please reconsider your selections coded C (would take if offered) as to your 1st, 2nd, 3rd, etc, choice.

1st_____ 2nd_____ 3rd_____

4th_____ 5th_____

STUDENT SURVEY

The purpose of this survey is to provide an indication of student preferences from a list of vocational courses. The totals will be used to determine the types of courses that might be offered at a proposed vocational-technical training center for high school juniors and seniors. This school, which might exist in a few years, would provide specialized skills that would enable students to enter the working force immediately after graduation, with a special skill or trade.

In the case of those who might attend, students would attend their own high school for a half-day and then be transported to the area vocational school for the other half. The courses required for graduation would be taken at WHS, while vocational and technical courses would be taken at the four-county training center. It is hoped that qualified juniors and seniors would receive specialized skills and knowledges in such subject areas as Agriculture, Business, Home Economics, and Industrial Arts.

Please circle two courses from the list below which you would be most interested in taking for a half-day during a two-year period. Space is provided where you may list two courses not listed.

Auto Body Repair	Appliance Repair	Greenhouse Management
Auto Mechanics	Building Maintenance	Health Aid
Diesel Mechanics	Radio-TV Repair	Practical Nursing
Small Engine Repair	Sheet Metal	Licensed Practical Nurse
Carpentry	Accounting	Child Care
Electricity	Secretarial	Food Service
Masonry	Data Processing	Cooking and Baking
Plumbing and Heating	Commercial Art	Sewing

Drafting	Retail Sales	_____
Machinist	Horticulture	_____
Printing	Floral Arrangement	_____
Welding	Landscaping	

State of Indiana
Department of Public Instruction
Division of Vocational Education

ADULT SURVEY

AREA VOCATIONAL SCHOOL

An area vocational-technical school would primarily provide junior and senior high school students with a large variety of specialized courses that would prepare them to enter the working force immediately after graduation with a special skill or trade.

In most cases, students would attend the vocational school on a half-day basis. The other portion of the school day would be spent at their home school, where they would take the academic courses necessary for graduation, and take part in the other school activities.

Another function of the vocational-technical school would be to provide training for high school drop-outs, post-high school students, and adults who would like to upgrade their present position or obtain new skills for a better job.

You can help us to help your children and the adults of the community by completing the following questionnaire and seeing that it is returned to the local high school. Any comments you might like to make concerning an area vocational-technical high school can be made on the back of this survey form.

YOUR NAME_____OCCUPATION_____

SPOUSES'S_____OCCUPATION_____

ADDRESS_____CITY_____

Number of children below school age_____

Number in grades 1 to 8_____ Number in grades 9 to 12_____.

1. Do you believe there is a need for an area vocational-technical school as described above? ___yes ___no

2. Would you encourage your children to enroll in courses at the area vocational-technical high school if it is available when they are juniors or seniors? ___yes ___no

3. Would you be interested in attending evening classes for adults and post-graduates? ___yes ___no

4. If the answer to question 3 is YES, circle two courses you would be most interested in attending from the list below. You or your husband/wife may write-in courses not listed.

Auto Body Repair	Appliance Repair	Greenhouse Management
Auto Mechanics	Building Maintenance	Health Aid
Diesel Mechanics	Radio-TV Repair	Practical Nursing
Small Engine Repair	Sheet Metal	Licensed Practical Nurse
Carpentry	Accounting	Child Care
Electricity	Secretarial	Food Service
Masonry	Data Processing	Cooking and Baking
Plumbing and Heating	Commercial Art	Sewing
Drafting	Retail Sales	
Machinist	Horticulture	_____
Printing	Floral Arrangement	_____
Welding	Landscaping	

STUDENT VOCATIONAL INTEREST QUESTIONNAIRE

Your school and community are interested in helping students to do the best possible job of choosing and preparing for a field of work in line with their abilities and interests, and one in which they will have a reasonable opportunity for employment. With the information you furnish, and information about job opportunities, your school should be able to do more to help students make wise vocational choices and plans.

This questionnaire is divided into two parts, the Activity Interest Section and the Training and Vocational Choice Record. The purpose of the Activity Interest Section is to determine what activities you like, dislike, or are unsure about. The Training and Vocational Choice Record is to obtain information about your educational and vocational plans.

INSTRUCTIONS

1. Sign your full name on all five cards where it says Student's Signature. Please keep the cards in order.
2. There are four cards to be used for marking your responses to the items on the Vocational Interest Questionnaire. Card #1 is used for items 1 through 50, card #2 for items 51 through 100, card #3 for items 101 through 150 and card #4 for items 151 through 199. Card #5 will be used to mark your responses to the Training and Vocational Choice Record. Please do not mark in the booklet.
3. Read each interest item listed carefully, and respond to them on the separate answer cards by filling in the circle A, B, or C, if you:
   A. Like an activity
   B. Are indifferent to the activity
   C. Dislike the activity

EXAMPLE:

1. Setting a table and serving food correctly.
2. Acting as a receptionist.
3. Maintaining and repairing gasoline engines.

_____

_____

Student's Signature
Exam Card No. 1

Answers to questions 1-50

1.	A	B	C	D	E	26.	A	B	C	D	E
2.	A	B	C	D	E	27.	A	B	C	D	E
3.	A	B	C	D	E	28.	A	B	C	D	E

1. Working with business records such as sales slips, receipts, bills, records, and amount of goods purchased or work done.
2. Helping in the supervision of children's activities.
3. Buying merchandise to be resold in a retail or wholesale business.
4. Operating adding machines and calculators.
5. Helping to care for an elderly person by performing personal services.
6. Acting as a receptionist.
7. Displaying horticultural plants including flowering ornamental and vegetable plants.
8. Planning and organizing household activities and managing a home.
9. Taking the responsibility of caring for children while parents are at work.
10. Working in a print shop or publishing company.
11. Sorting, indexing, and assembling papers and other written records.
12. Operating a sewing machine.
13. Collecting information to compile reports.
14. Selecting, storing, and displaying of fresh fruits and vegetables.
15. Arranging food so that it is attractive and appetizing.
16. Accepting deposits or loan payments as a teller in a bank.
17. Taking apart mechanical things and putting them back together again.
18. Reading instructions or interpreting rough sketches to help plan sheet-metal objects.

19. Treating animals for diseases and parasites.

20. Cleaning a house.

21. Contacting many retail and wholesale businesses to show merchandise.

22. Working on engine ignition and carburetion systems.

23. Laying cut designs on sheetmetal.

24. Carrying trays, cleaning utensils, and assisting nurses in caring for patients.

25. Working with ideas such as planning, designing, drawing, or writing.

26. Finding out what profit or losses a business makes.

27. Setting a table and serving food correctly.

28. Managing a retail, wholesale, or service establishment.

29. Serving meals to persons who are ill.

30. Cleaning, pressing, and mending clothing.

31. Figuring out arithmetic problems using multiplications, divisions, squares and square roots.

32. Advising customers on the use of chemicals for weed and insect control.

33. Leading groups of children in their activities such as games, crafts, and sports.

34. Operating a printing press.

35. Teaching simple games and songs to young children.

36. Working on furnaces and air conditioners.

37. Writing letters for and reading to an elderly or ill person.

38. Grading fresh fruits and vegetables.

39. Taking dictation in shorthand or on a shorthand machine.

40. Helping children to get along with other children.

41. Examining mechanical equipment for wear or damaged parts to determine repair needs.

42. Helping to prepare and serve foods.

43. Cutting and shaping metal objects or parts using handtools and machines.

44. Helping people to choose new merchandise wisely.

45. Greasing and oiling machines.

46. Selling various items of merchandise or service such as automobiles, clothing, electrical applicances, insurance, etc.

47. Planning an electrical system for buildings.

48. Working on a job that requires strength and active movements.

49. Taking orders and serving food in a restaurant.

50. Planning menus and preparing meals.

51. Helping prepare special diets for a patient.

52. Copying long lists of numbers and checking to be sure they are copied right.

53. Helping in the care of young children in a nursery school.

54. Supervising other employees in a retail, wholesale, or service establishment.

55. Copying figures or words neatly and orderly.

56. Setting type by hand or machine for printing or working with sizes.

57. Visiting persons who are ill.

58. Advising concerning identification of plants, insects, and diseases.

59. Working with people.

60. Working in an office.

61. Planning the arrangement of pictures or printing articles on a page to make it attractive.

62. Reading stories to children.

63. Preparing fruit and vegetables for marketing including trimming, washing, and packaging.

64. Operating keypunch machine.

65. Baking pies, cakes, and pastries.

66. Interviewing people applying for a charge account in retail or wholesale businesses.

67. Repairing or replacing a worn or damaged motor or other mechanical parts of an automobile or diesel truck.

68. Operating welding equipment.

69. Sewing by hand.

70. Reading about new developments in textiles and new fashions.

71. Giving permanents and other treatments for women's hair.

72. Informing customers what an article of merchandise or service will do for them.

73. Caring for children in a private home.

74. Making clothes for others.

75. Working with doctors and nurses to help sick people.

76. Typing letters and reports.

77. Arranging attractive displays of merchandise.

78. Helping farmers in preparing an economical feeding program for their livestock.

79. Filing written reports alphabetically or according to subject matter.

80. Using electric household appliances.

81. Proofreading printed copy.

82. Explaining uses of new products or services to people.

83. Displaying and selling home and garden plants, shrubs, and equipment.

84. Operating office machines.

85. Typing from a dictation machine.

86. Selecting seed and maintaining turf grasses.

87. Fitting and altering garments.

88. Receiving, inspecting, weighing, and handling fruit or vegetable products.

89. Figuring out logical and orderly steps to work problems.

90. Shopping for food.

91. Tuning up motors to see that they are running right.

92. Helping people to select goods or services.

93. Working with decorators.

94. Reading and trying out new recipes.

95. Giving manicure and hand care treatments.

96. Developing advertisements to sell merchandise or services.

97. Doing laundry and ironing.

98. Working with your hands.

99. Shopping for patterns and fabrics.

100. Receiving, checking purchase orders against invoices, and storing supplies for resale.

101. Testing radio and television sets.

102. Working outdoors.

103. Constructing and using plant growing structures such as greenhouses.

104. Making chemical laboratory experiments.

105. Working in a scientific laboratory.

106. Using hand and power tools.

107. Making calculations to determine angles, curves, or shapes of small wooden parts.

108. Repairing and maintaining garden tractors and lawn equipment.

109. Changing fuses and fixing short circuits.

110. Keeping machinery in a factory in operation.

111. Studying the theory of electricity including direct and alternating currents, volts, amperes, ohms, etc.

112. Supervising crews in the sodding and seeding of lawn areas.

113. Studying consumer preferences.

114. Working in a dentist's laboratory.

115. Working in factory, garage, or workshop.

116. Running machines that cut or grind small shavings from metal parts.

117. Keeping experiment records, charts, and graphs.

118. Supervising the preparation and sale of floral products.

119. Working with a microscope to study minute objects.

120. Operating metal working machines such as engine lathes, milling machines, power hacksaws, grinders, and shapers.

121. Feeding and caring for livestock.

122. Repairing furniture.

123. Studying ways of increasing the profits from livestock.

124. Shaping metal parts from blueprints and specifications.

125. Finishing or refinishing fine wood surfaces using shellac, stains, varnishes, and other wood finishing materials.

126. Working in a bakery.

127. Helping farmers to determine the machinery needs for their farm business.

128. Selecting or designing hair styles.

129. Maintaining and repairing gasoline engines.

130. Creating posters and show cards to advertise products or events.

131. Cutting, tinting, and dyeing hair.

132. Studying soil characteristics.

133. Displaying garden store products.

134. Repairing bus, truck, tractor, and heavy duty diesel engines.

135. Operating and maintaining special turf equipment such as mowers.

136. Growing and marketing flowers.

137. Assisting a dentist during treatment of patients.

138. Preparing and packaging flowers for sale.

139. Working in a service station or garage.

140. Developing and drawing up plans for the construction of a bridge or building.

141. Studying how plants grow.

142. Working with lumber, paints, masonry, building materials, etc.

143. Preparing landscape plans for home or public grounds.

144. Working in a cleaning and pressing establishment.

145. Working the mathematical problems necessary to draw things to scale.

146. Working with wood, fabrics, and leather.

147. Operating machinery or equipment.

148. Giving first aid treatment.

149. Pruning, fertilizing, and caring for ornamental shrubs and shade trees.

150. Using carpenter's tools to perform general carpentry work such as erecting wood building frames, laying floors, and installing wood trim.

151. Working from exact tracings or copies of plans or designs made by someone else.

152. Assembling or adjusting machinery and explaining to customers how a machine works.

153. Repairing or replacing defective parts in radio or television sets.

154. Giving skin beauty treatments.

155. Recognizing and controlling plant insects and diseases.

156. Designing and preparing diagrams and sketches for publications and exhibitions.

157. Designing lawn areas for commercial concerns such as golf courses, parks, factories, etc.

158. Identifying shrubs and trees.

159. Working on a job that is active and requires the use of math problems, formulas, and bookkeeping procedures.

160. Repairing damaged automobiles and replacing broken body parts and pounding out dents.

161. Working with projects that control soil erosion.

162. Assisting in the preparation of foods in quantity.

163. Designing and making floral displays.

164. Working with gauges and tools that make very fine measurements.

165. Running lathes, drill presses, and other machine shop equipment.

166. Working with laundry and dry cleaning equipment.

167. Studying the effects of different fertilizers.

168. Supervising the selction and planting of ornamental shrubs and shade trees.

169. Working on a job that requires very delicate hand movements and very close inspection and precision.

170. Assembling electrical equipment or motors.

171. Growing and marketing of nursery and greenhouse produce.

172. Drawing things to exact scale.

173. Working as a nurses aide in a hospital or as a practical nurse at home.

174. Advising customers concerning fertilizing and control of insects and diseases of plants, shrubs, and trees.

175. Giving shampoo and scalp treatments.

176. Replacing or repairing worn or damaged parts of wooden structures, such as window or door frames, steps, beams, or scaffolds.

177. Working from blueprints.

178. Wiring, splicing, soldering, and installing electrical connections.

179. Supervising the transplanting of nursery crops.

180. Installing and adjusting automatic equipment.

181. Illustrating stories, advertisments, or articles in books.

182. Designing and installing drainage systems for lawn areas or golf greens.

183. Developing new kinds of flowering plants through controlled breeding techniques.

184. Lettering signs or posters and advertising copy for magazines or newspapers.

185. Taking and developing dental X-rays.

186. Designing machinery and mechanical or electrical equipment.

187. Improving livestock production through animal selection and breeding programs.

188. Making corsages.

189. Painting and refinishing automobiles or repaired body sections.

190. Laying out and caring for flowers and shrub gardens.

191. Repairing electrical stoves, vacuum cleaners, fans, and motors.

192. Working with cooking ingredients.

193. Making an analysis of soil to determine specific fertilizer needs.

194. Planning wiring diagrams and installing electrical wiring circuits, outlets, and fixtures.

195. Making experiments using principles of physics.

196. Working in cloth and fabrics.

197. Identifying and using plants for the landscaping of homes and public buildings and grounds.

198. Repairing buildings.

199. Using drafting tools to prepare detailed plans and drawings of things to be built.

TRAINING AND VOCATIONAL CHOICE RECORD

The main purpose of vocational courses in a high school is to help young people prepare for beginning employment in a particular field of work. Your answers to the following questions will help your school to plan the best possible high school courses for students whether they plan to go to work immediately after graduating or go on to a college. Please answer them as completely and accurately as possible.

WHAT ARE YOUR PLANS? In each of the following check the one answer which best applies to you.

1. I have
   a. a definite plan for my life work.
   b. sort of a plan.
   c. no idea of what I want to do or be.

2. My parents
   a. know of my plans and agree.
   b. know of my plans but disagree.
   c. do not know of my plans.

3. I plan to stay in high school until I graduate:
   a. yes
   b. no

4. I am planning to go to college:
   a. yes
   b. no

5. I am planning some further training after high school other than college. (i.e., nurse's training, business school, etc.):
   a. yes
   b. no

6. I WOULD LIKE TO HAVE THE OPPORTUNITY TO TAKE SOME VOCATIONAL TRAINING IN HIGH SCHOOL:
   a. yes
   b. no

IF YOUR ANSWER TO QUESTION 6 IS YES, CAREFULLY SELECT A FIRST AND SECOND CHOICE FROM THE 46 BELOW.

BUSINESS AND OFFICE EDUCATION

1. Bookkeeping and Accounting
2. General Clerical
3. Stenographic
4. Data Processing

DISTRIBUTIVE EDUCATION

5. Retail
6. Wholesale
7. Service Establishments

HOME ECONOMICS

8. Child Care
9. Food Service
10. Clothing Service
11. Nursing and Rest Home Aide
12. Homemaker's Assistant

AGRICULTURE

13. Production Agriculture
14. Agriculture Equip. and Mechanics
15. Agriculture Business and Services
16. Production Horticulture
17. Produce Processing and Marketing
18. Greenhouse Operation
19. Floristry
20. Landscaping and Nursery
21. Turf Management
22. Garden Center Operations

TRADE AND INDUSTRIAL EDUCATION

23. Auto Mechanics
24. Auto Body and Fender Repair
25. Beauty Operator
26. Building Maintenance Mechanic
27. Carpenter
28. Commercial Art
29. Commercial Cooking and Baking
30. Dental Assistant
31. Diesel Engine Mechanic
32. Draftsman
33. Electrician
34. Fabric Services
35. Furniture Upholstery and Repair
36. Industrial Laboratory Assistant
37. Machinist
38. Machinery Maintenance and Service Mechanic
39. Medical Laboratory Assistant
40. Nurse's Aide & Practical Nursing
41. Printing
42. Refrigeration and Heating Service
43. Radio and Television Electronics
44. Tailoring and Dressmaking
45. Utility and Appliance Mechanic
46. Welding and Sheetmetal

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